



UNIPOWER

MEDIMOD AE-080UM
AC INPUT / MEDICAL APPROVED
80 WATT POWER PLATFORM
5.00 x 3.20 x 1.50" | 125.0 x 81.3 x 38.1mm



CB

CE



DESCRIPTION

UNIPOWER's **AE-080UM SERIES** is an 80 Watt Medical Power Supply platform with both standard and configurable models featuring output voltage(s) that can be quickly configured to order while maintaining all international safety approvals.

These power supplies are available with Universal AC Input and single or quad output configurations ranging from 1.5 to 48 VDC. The AE-080UM feature an industry-standard footprint, medical safety approvals, Class B emissions; and -20 ~ +70°C operation (see derating).

EASYMOD UPGRADES include a multitude of output voltage configurations, optional covers (with or without fan), extended temperature operating range, isolated outputs, DC inputs, attached wire harnesses and much, much more. All these modifications are available without any impact on safety approvals to reduce both development cost and time to market.

FEATURES

- ◆ Universal AC Input Range (90-264 VAC)
- ◆ Industry-Standard 3" x 5" U-Frame Footprint
- ◆ 1 or 4 Outputs configurable from 1.5~48VDC
- ◆ Medical Safety Approvals
- ◆ >250k Hours MTBF (MIL-217F)
- ◆ Optional -40°C Guaranteed Start-Up



**Contact Unipower to discuss
your application and define
the right part number for your
specific application.**

TWO-YEAR WARRANTY

INTERNATIONAL STANDARDS

UL/cUL 60601-1
CB Report, IEC60601-1
CE Mark (LVD)

FLEXIBLE OUTPUT CONFIGURATION GUIDELINES

with 90-264 VAC Input and -20-50°C Operation

Single Output Capabilities

OUTPUT CURRENT	1.5~3.3V	5V	12V	15V	24V	48V
MINIMUM	0A	0A	0A	0A	0A	0A
CONVECTION ⁽³⁾	12A	12A	5.0A	4.0A	2.5A	1.25A
15 CFM AIR ⁽⁴⁾	16A	16A	6.6A	5.3A	3.3A	1.67A
PEAK ⁽⁵⁾	19A	19A	7.5A	6.3A	3.75A	1.87A

Multiple Output Capabilities

OUTPUT	DC OUTPUT	MIN	CON ⁽³⁾	AIR ⁽⁴⁾	PEAK ^(4, 5)
V1	1.5 ~ 48V ⁽⁷⁾	1.0A ^(2,13)	10.0A	14.0A	16.0A
V2	1.5 ~ 48V ⁽⁸⁾	0.4A ^(2,13)	4.0A	7.0A	9.0A
V3	1.5 ~ 48V ⁽⁸⁾	0.4A ^(2,13)	4.0A	5.0A	6.5A
V4	1.5 ~ 48V ⁽⁸⁾	0.2A ^(2,13)	2.0A	3.0A	4.0A

- (1)...Full power out on V3-V4 with minimal V1 and V2 loading—Option.
 (2)...10% minimum load for stated regulation on multiple O/P units.
 (3)...Convection cooling.
 (4)...15 CFM forced air cooling. conditions.
 (5)...30 seconds maximum duration.
 (6)...Most output combinations from 1.5 to 48 Volts possible; up to maximum rated Current / Power..Consult UNIPOWER.

- (7)...Specify 0.1V increments.
 (8)...Specific output voltage is current dependent.
 (9)...Regulation may degrade under some output Consult UNIPOWER.
 (10).Consult UNIPOWER for Model #.
 (11).For outputs >48 Volts, consult UNIPOWER.
 (12).Cover and custom sheet metal available.
 (13).10% minimum of marked rating.

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STOCKED / OFF-THE-SHELF MODELS

Listed below are common configurations stocked by UNIPOWER for immediate delivery.

Single Output Models

MODEL	V1	MIN	CON	AIR	PEAK
AE-080UM-S1-STD	5V	0A	12.0A	16.0A	19.0A
AE-080UM-S2-STD	12V	0A	5.0A	6.6A	7.5A
AE-080UM-S4-STD	24V	0A	2.5A	3.3A	3.75A
AE-080UM-S5-STD	48V	0A	1.25A	1.67A	1.87A

Quad Output Models

MODEL	V1	MIN	CON	AIR	V2	MIN	CON	AIR	V3	MIN	MAX	V4	MIN	MAX
AE-080UM-Q1221-STD	+5V	0.5A	5A	8A	+12V	0.4A	2A	4A	-12V	0.4A	2A	-5V	0.2A	2A
AE-080UM-Q1331-STD	+5V	0.5A	5A	8A	+15V	0.4A	2A	4A	-15V	0.4A	2A	-5V	0.2A	2A
AE-080UM-Q1224-STD	+5V	0.5A	5A	8A	+12V	0.4A	2A	4A	-12V	0.4A	2A	+24V	0.2A	1.5A
AE-080UM-Q1334-STD	+5V	0.5A	5A	8A	+15V	0.4A	2A	4A	-15V	0.4A	2A	+24V	0.2A	1.5A
AE-080UM-Q0122-STD	+3.3V	0.5A	5A	8A	+5V	0.4A	2A	4A	+12V	0.4A	2A	-12V	0.2A	2A
AE-080UM-Q0133-STD	+3.3V	0.5A	5A	8A	+5V	0.4A	2A	4A	+15V	0.4A	2A	-15V	0.2A	2A
AE-080UM-Q0124-STD	+3.3V	0.5A	5A	8A	+5V	0.4A	2A	4A	+12V	0.4A	2A	+24V	0.2A	1.5A

MIN = Minimum Load Required for specified regulation

CON = Maximum continuous output current with Convection Cooled Operation (Total power not to exceed 60 Watts continuous)

AIR = Maximum continuous output current with 15 CFM Airflow Operation (Total power not to exceed 80 Watts continuous)

OPTIONAL TOP COVER Add suffix C to the end of the model number to include a ventilated top cover.

SPECIFICATIONS

Typical at Nominal Line, Full Load and 25°C Unless Otherwise Noted.

INPUT

Input Voltage Range Options.....	90-264 VAC
Frequency.....	47-63Hz
Power Factor.....	EN61000-3-Compliant
Inrush Current.....	35A Max (cold start)
Input Current @ 115VAC.....	2.5A max
Fusing, dual fuse.....	3.15A / 250VAC
Leakage Current.....	100µA max @ 264VAC

OUTPUT

Output Power.....	60W Convection / 80W with 15 CFM Airflow
Hold-up Time.....	16mSec
Efficiency.....	75% Typical
Adjustment Range (V1 Only).....	±5%
Ripple / Noise, max.....	1% pk-pk max
Line Regulation.....	. Max ±0.2%
Load Regulation @ 60% ±40% Full Load	
V1.....	±3% max
V2-V3.....	±5% max
Cross Regulation @ 60% ±40% Full Load	
V1: Change in V2 - V3.....	±0.5%
V2 - V4: Change in V1 @75 ±25% F/L	±5% max
Overshoot Protection (V1 Only).....	>130% (Latch Off)
Power Limit.....	>120% (Auto-Recovery)
Overshoot (all outputs).....	10% max
Response Time.....	500 µSec (25-75% step load)
Switching Frequency.....	60KHz (typical)

ENVIRONMENTAL

Operating Temp. Range	-20°C to +50°C (Full Load)
Consult factory for -40°C Guaranteed Start-Up and Industrial Temperature Range options	
Output Current Derating	2.5%/°C, 50°C to 70°C
Storage Temp. Range	-40°C to +85°C
Humidity.....	.5% to 95%, Non-Condensing
MTBF, 25°C (MIL217F)	>250,000 Hours
Cooling	15 CFM Airflow for Full Power
Immunity.....	EN61000-4-2; -3; -4; -5; -6; -8; -11
Altitude.....	10,000 feet

PHYSICAL SPECIFICATIONS

Case Dimensions	5.00 x 3.20 x 1.00" / 127 x 81.3 x 38.1mm
Weight	0.9 lbs. (0.41 kg.)
Vibration from 10 - 55Hz.....	1.0G Peak
(3 orthogonal axes @ 1 octave/min, 5 minute dwell @ 4 major resonances)	

SAFETY STANDARDS

UL60601-1, CB REPORT (IEC 60601-1), CE MARK (LVD)

EMI STANDARDS

FCC Class A & VDE Class A, CISPR 11; EN 55011 Class A
(Class B optional, consult factory)

OUTLINE DRAWING

CONNECTOR 1

(MOLEX#09-65-2058 OR EQUIVALENT;
MATING CONNECTOR= MOLEX#09-50-3051)

PIN1.....	GROUND
PIN2.....	KEY
PIN3.....	NEUTRAL
PIN4.....	KEY
PIN5.....	LINE

CONNECTOR 2 (single output)

(MOLEX#09-65-2088 OR EQUIVALENT;
MATING CONNECTOR= MOLEX#09-50-3081)

PIN1	V1
PIN2	V1
PIN3.....	V1
PIN4.....	RET
PIN5.....	RET
PIN6.....	RET
PIN7.....	NC
PIN8.....	NC

CONNECTOR 2 (multi-output)

(MOLEX#09-65-2088 OR EQUIVALENT;
MATING CONNECTOR= MOLEX#09-50-3081)

PIN1	V2
PIN2	V1
PIN3.....	V1
PIN4.....	RET
PIN5.....	RET
PIN6.....	V3
PIN7.....	V4
PIN8.....	V4 RET

